~~There is a need for a better solution.~~

~~SUMMARY OF THE INVENTION~~

~~The present invention is an improved a supplemental restraint system for a vehicle that has a weight-sensing unit mounted to one or more seats for sensing the weight of a sitting occupant, a computerized system for calculating an operating weight value corresponding to that weight, and an airbag system comprising one or more airbags and a deployment unit, the deployment unit configured to inflate the airbags with a deployment force and acceleration proportionate to the operating weight value when a sufficient collision force is sensed by a collision sensor.~~

~~corresponding to the operating weight value that is based on the weight of the occupant **20** in the seat **14**, the deployment force then corresponds directly to the weight of the occupant in the seat as well in order to optimize the safety of airbag deployment and reduce injuries to occupants as a result.~~

~~In one embodiment, a collision sensor **70** signals the control module **28** when a minimum threshold collision severity has occurred in order to start the supplemental restraint system process according to the present invention. In other embodiments, the minimum threshold collision severity comprise a collision substantially equivalent to a vehicle traveling between about 10 m.p.h. and about 15 m.p.h. and hitting a substantially rigid wall (not shown). In yet other embodiments, the collision sensor **70** signals the canister microprocessor **54** directly or the igniter **60** directly to initiate the ignition of the proportionate volume of gas released into the combustion chamber **46**. In the latter case, the system **10** of the present invention prepares the sliding pot **56** position and volume of igniting gas in advance when the operating weight value is determined from the weight of the occupant **20** on the seat **14**. In yet other embodiments, the collision sensor **70** only signals a collision event has occurred when the collision exceeds predetermined speed and collision force thresholds for deployment of the airbags **18**, so that deployment depends on collision severity.~~

~~In one embodiment, the ROM **32** comprises a portion that is erasable and programmable (EPROM). The EPROM erases the data in the address line **40** in the BIOS **34** for a particular seat **14** every time an occupant **20** leaves a seat. The EPROM then replaces the data with new data when the occupant or a new occupant takes the seat.~~

~~In one embodiment, the system **10** of the present invention is used in conjunction with a smart seatbelt system **72**. In other embodiments, the smart seatbelt system **72** will prevent the~~

~~vehicle from starting unless one or all occupants **20** are wearing their seatbelts **74**. If the occupants **20** decide to put on the seatbelts **74** simply to start the vehicle, as soon as the seatbelts are disconnected, the engine (not shown) will shut off. As a result, the engine will stay running only when all of the seatbelts **74** are worn in all of the occupied seats **14**. In another embodiment, the smart seatbelt system **72** will not allow disconnection of the seatbelt **74** in any way or form unless the engine is first turned off. In this way, a seatbelt processor **76** in the CPU **30** will monitor seatbelt disconnection processes and disable the vehicle's starting means **78** when an occupant **20** is not belted. In yet other embodiments, if a driver decides to stop and pick up another occupant with the engine running, or if the occupant enters the car and fails to put on the seatbelt, the seatbelt processor **76** will deliver a signal to the vehicle starting means **78** to shut the vehicle engine off. The vehicle will only be able to restart when the occupants buckle their seatbelts.~~

~~The load cells **24** or other sensors (not shown) in the vehicle can measure additional data relevant to occupants **20** in a vehicle. For example, in one embodiment, sensors are installed inside the vehicle in various locations to sense the position of the occupants **20** within their respective seats **14** or the positions of the respective occupant's arms and legs, such as propped up on the dashboard (not shown). This data may be processed and stored in the CPU **30**. In other embodiments, the CPU **30** may signal a driver of the vehicle regarding unsafe conditions or behavior resulting from different occupant's unsafe body positions. In yet other embodiments, such signals comprise a verbal report. In yet other embodiments, the vehicle is disabled after a preset time until such unsafe behavior or positioning is corrected.~~

~~In one embodiment, a weight sensing unit **12** alternative configuration comprises a pressurized, inflatable or inflated bag **80** mounted in the cushion **82** of the seat **14** or beneath the~~

~~seat. When an occupant **20** occupies a seat **14**, the weight of the occupant will either displace a certain amount of the stored pressure in such bag **80** to a relay valve **84** or initiate the inflatable bag **80** to inflate that specific amount of air to the relay valve **84** that will record the displacement or inflation, as the case may be, as the occupant's weight value. The displaced pressure or the inflated air pressure is the maximum pressure that, when the collision sensor **70** senses a collision,. it will signal the accelerometer **52** which then initiates the deployment speed and force of the airbags **18** to correspond to the displaced pressure or the inflation pressure from the bag **80**. The displaced or inflation pressure is the maximum pressure for the maximum acceleration in deployment force of the airbags **18** that may be deployed when the collision sensor **70** senses a sufficient collision force. When the occupant **20** leaves the seat, the weight removed will displace stored pressure or allow reinflation of a deflated bag **80** that is equal to the weight value of the occupant **20**. If the weight value matches or exceeds the stored pressure, then the acceleration and deployment force will have a constant value when a collision is sensed. The displacement or inflation recorded by the relay valve **84** will be transformed into a weight unit for the CPU **30** to recognize. The CPU **30** will then carry on the calculations and computations according to the present invention the same way as for the conventional load cell **24** configuration. In light of the foregoing, alternative means for measuring weight values and communicating them to the CPU **30** are also within the scope of the present invention, which is not intended to be limited by the specific description of a load cell **24** or the above alternative inflatable bag **80** configuration therefor.~~

~~In operation, when the ignition switch (not shown) for the vehicle is turned on, an electrical current of 5 milivolts will power the load cell **24** prior to the CPU **30**. When an occupant **20** occupies any of the seats **14** in the vehicle, the load cell **24** or cells for each seat **14**~~

~~will read the energy from the weight input from the occupant 20 in the seat 14 to communicate with the CPU 30 to enable data processing and computation. The CPU 30, once powered, runs functions that check all of the hardware components functionality to ensure that they are functioning properly. The CPU 30 comprises a computer chip motherboard (not shown) that contains the CPU operating components 32, 34, 36, 76, etc. Once the CPU 30 conducts its system-functionality check, a boot program (not shown) then checks to see if any occupants 20 have occupied any of the seats 14. The boot program does this by searching for signals output from the load cell 24. The boot program then sends the information from the load cells 24 to the address line 40 in the BIOS 34. The 5 milivolt current from the power source (not shown) of the vehicle is used to generate the electric line signals that are communicated back and forth between the components of the present invention. Components such as the strain gauges 26 and the accelerometer crystals 64 being electrical resistance elements, the current used to convey the electric line signals is thus manipulated as a result of the increase or decrease in the resistance of these elements when current or strain is applied.~~

~~In one embodiment, a load cell 24 comprises a corrosion resistant, high alloy steel construction. In yet other embodiments, a load cell 24 comprises a weight measuring capacity of up to about 1,000 lbs. In yet other embodiments, a load cell 24 comprises machined, high steel beams 86 having strain gauges 26 secured thereto. In yet other embodiments, the strain gauges 26 comprise electrical resistance elements sealed with a sealant (not shown) to prevent moisture or contaminants from disrupting strain measuring functions.~~

~~In one embodiment, a control module 28 comprises a silicon control rectifier that manages flow of data to the ROM 32 in the CPU 30. In other embodiments, the data comprises occupant weight information and other in-vehicle information regarding the occupant 20. The~~

~~CPU 30 comprises a ROM 32 having EPROM capabilities as well as a BIOS 34, and the CPU 30 further comprises RAM 36 and a software program 38 running within the RAM. The CPU 30 records information regarding the occupant 20, including how the occupant changes positions or shifts weight in the seat 14. The BIOS 34 comprises the basic control over the load cell 24 data stored in the ROM 32. The ROM contains a special chip (not shown) for the CPU 30 that contains instructions and other information that is not erasable or reprogrammable during the life of the CPU. The RAM 36 comprises the primary memory storage for running the software program 38 that accesses the occupant's information and allows the CPU 30 to calculate the operating weight value, among other data for use in accordance with the present invention.~~

~~In one embodiment, a signal amplifier 88 is employed for amplifying the electronic signals delivered from one component of the system 10 to the others.~~

~~Although the present invention is designed for use with a supplemental restraint system that utilizes a combustible gas for generating the force and volume for inflating an airbag, it is within the scope of a person or ordinary skill in the art to modify the present invention for use with a standard supplemental restraint system that utilizes a sodium azide/potassium nitrate reaction for producing hot and fast blasts of nitrogen gas to inflate the airbag. The solid propellant from the standard supplemental restraint system can be volumetrically controlled for~~

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